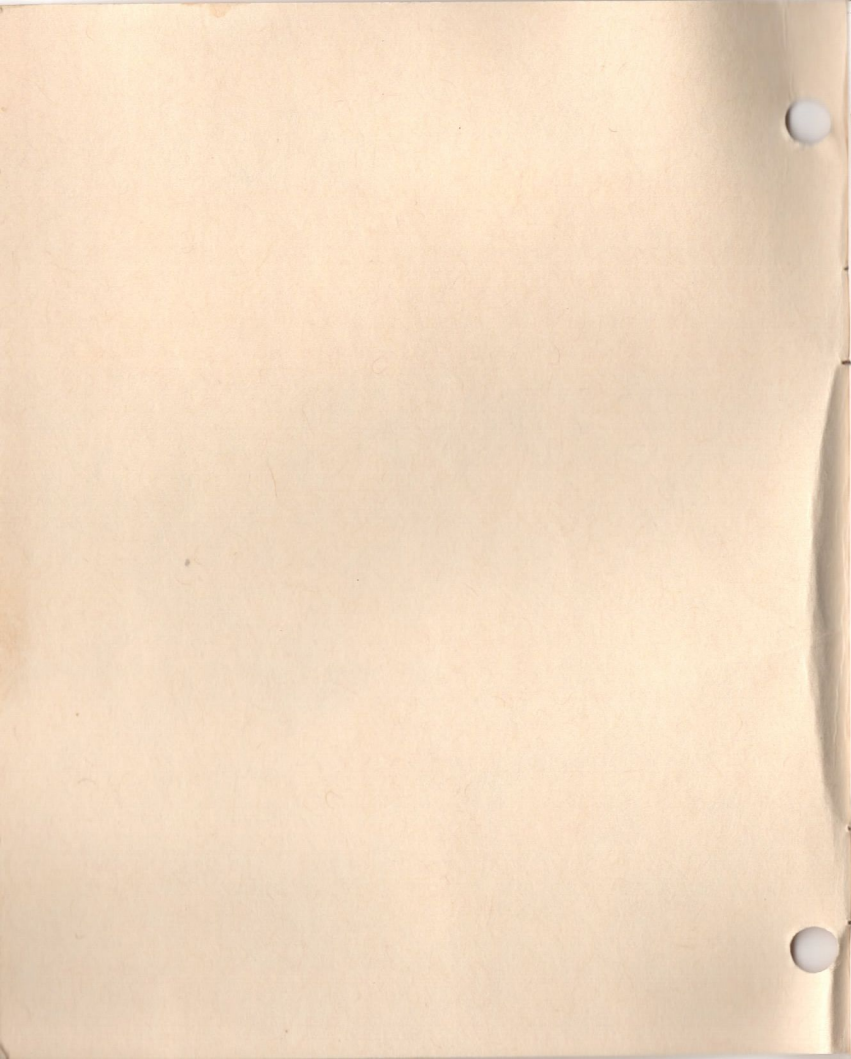


ZEBRA GRAPHICS TABLET
For the TIMEX/Sinclair 2068
OWNER'S MANUAL
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Zebra Systems, Inc.



ZEBRA GRAPHICS TABLET

For the
Timex/Sinclair 2068
Personal Color
Computer

Owner's Manual

Zebra Systems, Inc.

78-06 Jamaica Avenue Woodhaven, NY 11421

TEBIRA GRAPHICS TABLET

For the
Tmax/ Sinclair 2068
Personal Color
Computer

Owner's Manual

Tebira Systems, Inc.

78-66 Jamaica Avenue Westchester, NY 10431

TABLE OF CONTENTS

| | |
|------------------------------|----|
| Getting Started | 1 |
| System Requirements | 2 |
| Installation & Testing | 3 |
| Zebra Graphics Pad | 6 |
| Features | 7 |
| Care and Feeding | 8 |
| Introduction to ZebraPainter | 9 |
| Using Menu Commands | 10 |
| Using Screen Commands | 11 |
| Using Keyboard Commands | 12 |
| Screen Command Descriptions | 13 |
| Color Selection Commands | |
| Border | |
| Paper | |
| Ink | |
| Drawing Mode Selection | 13 |
| Draw/Erase | |
| Pen/Brush | |
| Precision Drawing Commands | 14 |
| Line | |
| Circle | 15 |

| | |
|-------------------------------------|----|
| Directional Drawing Modes | 16 |
| Vertical & Horizontal | |
| Vertical | 17 |
| Horizontal | 18 |
| Keyboard Command Descriptions | 19 |
| Copy Screen to Printer | |
| Clear Screen | 20 |
| Write text on drawings | |
| Lefthanded button swap | 21 |
| Screen storage commands | 22 |
| (Active & Inactive Screens) | |
| Store | |
| Restore | |
| Exchange | 23 |
| Tape Storage Commands | 24 |
| Save | |
| Load | |
| How to make Backups of ZebraPainter | 25 |
| Hints & Explanations | 26 |
| Sample Pictures | 27 |
| Limited Warranty | 30 |

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GETTING STARTED

We congratulate you on your purchase of the Zebra Graphics Tablet. There is no easier, more enjoyable way to draw color graphics on the TS2068 Computer. Your new Zebra Graphics Tablet is a versatile, state-of-the-art accessory that enhances the capabilities of your home computer system.

With its pressure sensitive surface, the Zebra Graphics Tablet can convert the touch of its stylus, or even your finger to computer input. Depending on the applications program you are using, the Zebra Graphics Tablet can be used to make menu selections, move game players, make musical notes, draw computer graphics and much more.

In the following sections, you'll learn how to connect the Zebra Graphics Tablet to your computer, and how to ensure continued performance from it.

SYSTEM REQUIREMENTS

The following are required to use the Zebra Graphics Tablet:

- * Timex/Sinclair 2068 Color Computer
- * Color TV or Color Monitor
- * Cassette Tape Recorder
- * Zebra Graphics Tablet
- * Zebra Graphics Interface
- * ZebraPainter Software

Installation & Testing

The Zebra Graphics Tablet and Zebra Graphics Interface have been designed to give you years of dependable operation. You must however, exercise care in its installation and use.

The Interface is shipped to you wrapped in conductive foil or a special plastic bag. This is to protect the delicate integrated circuits from static electricity.

- 1—Turn off the power to your computer and all its peripherals.
- 2—Unwrap the Interface from its static protecting foil or envelope.
- 3—Plug the Graphics Tablet into the right connector (labeled "B") of the Graphics Interface.

IMPORTANT

Notice that there is a key in the third slot of the Graphics Interface connector. This key is of the utmost importance. It allows you to properly line up the Graphics Interface with the TS2068 expansion connector. If you plan on connecting and disconnecting your Graphics Interface remember to always make sure this key does not fall out of place. Misaligning any peripheral on your expansion bus connector can cause your computer to burn out.

Also remember there should not be any power supplied to these peripherals when plugging or unplugging them from your computer or from each other.

4—Line up the Keyed Graphics Interface connector with the slotted TS2068 expansion connector and push the Graphics Interface firmly onto the TS2068 expansion edge. The Graphics Interface does not have to be the first peripheral plugged into the TS2068. It can for example, be plugged behind your TS2040 printer and 2050 Modem.

5—Power up your computer and peripherals. Your computer should come up as it normally does and sign on with the TIMEX Corporation copyright notice. If it does not, turn all power off immediately and contact the factory for assistance.

FEATURES

DRAWING SURFACE

This surface is pressure sensitive and can be used with either the stylus provided or your finger. The Zebra Graphics Tablet's internal circuitry converts pressure on the surface to location information that is sent to your computer.

CONTROL BUTTONS

These buttons may be used to confirm menu selections and data entries or as trigger controllers for computer games.

STYLUS

The stylus provided with your Zebra Graphics Tablet is specially designed to be used on the pressure sensitive drawing surface.

CARE AND FEEDING

While your Zebra Touch Tablet is designed to stand up to ordinary use for a long time, there are a few things to keep in mind while using it.

Give it a pleasant environment. Direct sunlight, excessive heat, submersion in water and other environmental extremes can be hard on it.

Keep it clean. Remove dirt and grease with a soft cloth dampened with a mild soap. Dry with a soft cloth.

Avoid needling it. Use blunt instruments, including the stylus provided or your finger, on its drawing surface. Sharp objects may permanently damage the surface.

Avoid burying it prematurely. Don't stack books, papers, or other objects on it.

Don't yank it around. The cord provides a path for sensitive electrical signals and should not be pulled or used as a handle.

Introduction to ZebraPainter

As soon as ZebraPainter loads type ENTER to run ZebraPainter. You will then see the start-up screen, type any key on your keyboard to clear this screen so you can start to draw. You will then see a blinking pointer at the approximate center of your screen. You can move your stylus around the Graphics Tablet and the pointer will move around on your screen.

There are two control buttons on your Graphics Tablet. One is labelled Draw/Erase, and the other is labelled Command/Select. Move the pointer around your screen while holding down your tablet's Draw/Erase button. Get the idea? The Zebra-Painter program starts out in the DRAW mode. Whenever you press down the Draw/Erase button you will be drawing wherever you move the pointer. Nothing could be simpler. Now let's explore more of the ZebraPainter commands.

USING MENU COMMANDS

At the bottom of the ZebraPainter screen is a command menu. All the commands are summarized in Appendix A and on your ZebraPainter Command Reference Card. There are two main types of commands; screen commands and keyboard commands. In this section of your manual we will give you an example of each type of command and how to use it. Then in the next section, all the available commands will be described.

USING SCREEN COMMANDS

Position your drawing stylus at the bottom left corner of your tablet and move it until your screen pointer is above the B at the far left of your command menu. The B stands for BORDER. Now press the Command/Select button on your Graphics Tablet eight times while maintaining the pointer position just above the B. You've just stepped your border through all of the TS2068's possible colors. You can in general hit the command button as many times as necessary to select the border color you are looking for.

In general, the means of activating any screen command is to position your screen pointer above it's command menu designation and press the tablet's Command/Select button the required number of times.

USING KEYBOARD COMMANDS

Some commands require keyboard input. To invoke any keyboard command you must first position your screen pointer to the extreme right side of your menu and press the Graphics Tablet's Command/Select button. The computer will prompt you with "COMMAND?" on the bottom line of the screen. Try typing CLS followed by the ENTER key. This will clear the screen. Notice that the screen clears and that the bottom line of the screen returns to "*** Zebra Painter ***" instead of "COMMAND?".

In general, all the keyboard commands are initiated in the same way as just described. All the command words are 5 letters or shorter, and you must hit the ENTER key after the word.

COLOR SELECTION COMMANDS

B BORDER

The BORDER command selects your border color by stepping through the colors in sequence.

P PAPER

The PAPER command selects your paper color by stepping through the colors in sequence. If you set your paper color equal to your ink color you will not be able to see any drawing occur.

I INK

The INK command selects your ink color by stepping through the colors in sequence. The area surrounding the menu letter I, indicates the ink color that you have selected.

DRAWING MODE SELECTION

DRAW / ERASE

The DRAW/ERASE command, determines which function of the Tablet's DRAW/ERASE button is enabled. You are always in one of the two modes. In the drawing mode, ink will be placed on the screen wherever you move the screen pointer and press the tablet's DRAW/ERASE button. In ERASE mode ink will be removed from the paper wherever you move the screen pointer and press the tablet's DRAW/ERASE button.

PEN / BRUSH

The PEN/BRUSH command selects your writing or erasing implement. For fine work, select the PEN which is one dot wide and one dot high. For heavier lines, select BRUSH for strokes five dots high and five dots wide.

PRECISION DRAWING COMMANDS

LINE DRAW LINE

The line function will draw a straight line between any two points that you designate. There are three steps to using this command:

1 - Position the screen pointer just above the menu where it says LINE and tap the tablet's COMMAND/SELECT button. Notice that the color of the menu area around the word "LINE" will change color to indicate that you have activated the line drawing function.

2 - Move the screen pointer to the starting point of the line you wish to draw and tap the COMMAND/SELECT button again.

3 - Move the screen pointer to the end point of the line you wish to draw and tap the COMMAND/SELECT button once more. The computer will then draw a straight line between the two points you've designated.

CIRC DRAW CIRCLE

The circle function allows you to draw a circle by pointing to its center and then to any point on its edge. Just follow these three steps:

1 - Position the screen pointer to just above the menu command word "CIRC" and momentarily press the touch pad's COMMAND/SELECT button.

2 - Move the screen pointer to where you want the center of your circle to be and then press the COMMAND/SELECT button again.

3 - Now position the screen pointer to any point where you want the edge of your circle to be drawn, and press the COMMAND/SELECT button again.

Your computer will draw a circle for you using the reference points you've provided.

DIRECTIONAL DRAWING MODES

One area of your screen menu will be displaying your current directional drawing mode, V&H, VERT, or HORZ. To change from one mode to another, position your screen pointer above this area and momentarily push down the COMMAND/SELECT button to step in sequence to the mode you want. When you are finished drawing in one mode, you can go back to this menu area again and select another mode. The three modes are described on the following pages.

V&H (Vertical & Horizontal)

In V&H mode, the screen pointer follows the motion of your touch tablet stylus in both up and down (vertical), and sideways (horizontal), directions. In this mode you can draw lines and curves of any shape and in any direction just by holding down your DRAW/ERASE button.

VERT (Vertical)

Vertical mode is used to draw perfectly vertical lines. In this mode you position your screen pointer to where you want to draw your line. Then as long as you hold down your DRAW/ERASE button, your tablet will only respond to the vertical motion of your stylus. Any sideways motion will be ignored. This gives perfectly vertical lines.

To draw additional vertical lines, just release the DRAW/ERASE button, move the pointer to where you want another vertical line, point to where you want another vertical line, and begin again by pressing down the DRAW/ERASE button.

HORZ (Horizontal)

Horizontal mode is used to draw perfectly horizontal lines. In this mode you position your screen pointer to where you want to draw your line. Then as long as you hold down your DRAW/ERASE button, your tablet will only respond to the horizontal motion of your stylus. Any up and down motion will be ignored. This gives perfectly horizontal lines.

To draw additional horizontal lines, just release the DRAW/ERASE button, move the pointer to where you want another horizontal line, point to where you want another horizontal line, and begin again by pressing down the DRAW/ERASE button.

KEYBOARD COMMANDS

Keyboard commands are entered by first moving your screen pointer to the right part of the menu above where it says COMMAND, and pressing the Graphic-Tablet's COMMAND/SELECT button. The bottom menu line will then ask you to type in a keyboard command.

COPY COPY SCREEN COMMAND

The COPY command will copy the contents of the screen to your TS2040 Printer. PAPER will print out in white, and INK will appear as black. The Menu display will not appear as part of your picture. Only the picture in the active screen will be printed. To print the inactive screen you must first swap the pictures using the EXCHG command, use the COPY command to print the screen, then use the EXCHG command again to swap the screens back.

CLS CLEAR SCREEN

The CLEAR SCREEN command is designated by the three letters CLS. This command clears the screen to the current paper color.

Advanced users may want to know that CLS also sets the hidden INK color to complement the current INK color. (ie: Dark Paper=White INK, Light Paper=Black INK) The hidden INK color only affects the visibility of the pointer and the LINE and CIRC commands.

WRITE WRITE MODE COMMAND

The WRITE command will put you in the text mode. In WRITE mode you can maneuver the screen pointer with the TS2068's UP, DOWN, LEFT, and RIGHT Arrow keys. Any text you type on the keyboard will then overwrite your screen image drawing at that location. In this way you can add any text you want to your drawings. Your current INK Color will be used to write your text characters. Hit the ENTER key to exit from WRITE mode back

to drawing mode.

LEFTY SWAP TABLET BUTTONS

The LEFTY command will swap the positions of the DRAW/ERASE and the COMMAND/SELECT buttons. The default setting is DRAW/ERASE as the left button, and COMMAND/SELECT as the right button. Executing this command will reverse this allowing left-handed users to use the pad more naturally. Executing this command again will switch them back to their default positions.

SCREEN STORAGE COMMANDS

Two complete screens can be stored in the TS2068's memory at once. The first screen is called the ACTIVE screen and is the screen displayed on your TV or monitor. The second screen is the INACTIVE screen. The following three commands allow screen images to be moved between the ACTIVE and INACTIVE screen storage areas.

STORE STORE IMAGE

The STORE command will copy the ACTIVE screen to the INACTIVE screen area making in effect two identical copies of your current display.

RESTR RESTORE SCREEN IMAGE

The RESTR command copies the INACTIVE screen to the ACTIVE screen, making them both the same.

EXCHG EXCHANGE SCREEN IMAGE

The EXCHANGE SCREEN IMAGE command is represented by the five letter command word EXCHG. This command swaps the ACTIVE and INACTIVE display screen images. It can be used any number of times for any number of swaps. If you make a mistake in your current screen, you may want to compare it to a previously saved screen. If you prefer the old inactive screen you can duplicate it and start again from that point.

TAPE STORAGE COMMANDS

SAVE SAVE SCREEN TO TAPE

The **SAVE** command saves the current active screen image to cassette tape. It will prompt you for a file name. Filenames should consist of 1 to 5 letters or numbers without leading spaces. **SAVE** will not change the current screen in any way. You can continue to work on it.

LOAD LOAD SCREEN FROM TAPE

The **LOAD** command will ask you for the name of the screen image file you want to load from tape. Type the name without any quotation marks followed by the **ENTER** key. Optionally you can just type the **ENTER** key to load the first file that occurs on your tape. The currently active screen file will be overwritten by the incoming image. The **INACTIVE** screen image will not be affected. Bad picture files on tape will return you to the draw mode with an incomplete picture.

Making Backup Copies

To make Backup copies of ZebraPainter, simply follow these instructions:

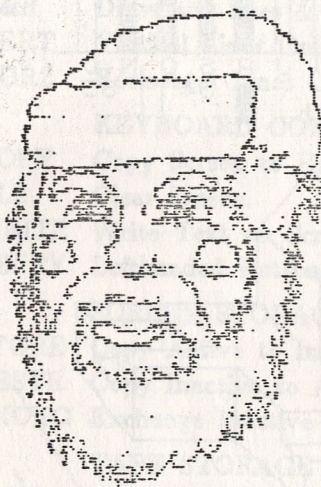
- 1 - Load your ZebraPainter tape but do not type ENTER to run ZebraPainter.
- 2 - Press "B" to make a Backup copy.
- 3 - Put a blank tape into your tape recorder and press the RECORD and PLAY buttons of your player.
- 4 - Then press any TS2068 key to begin saving the first part of ZebraPainter called: "zpaint".
- 5 - When the screen prompts you, press any key to save the second part of ZebraPainter called: "G-pad".
- 6 - When this save is complete you have a complete copy of ZebraPainter which will Auto-Start when you load it. At this point you may make another copy or run ZebraPainter.

HINTS & EXPLANATIONS

Lines and Circles

When drawing lines and circles note that they will only be visible against the PAPER color. They will not be visible in areas which have been drawn or painted with the INK color. Also, circles and lines will be drawn in black if there is a light PAPER color and white if there is a dark PAPER color. Circle and lines are draw using the Hidden INK color which is determined by the paper color used when the last CLS command was issued. (ie: Dark PAPER=White INK, Light PAPER=Black INK)

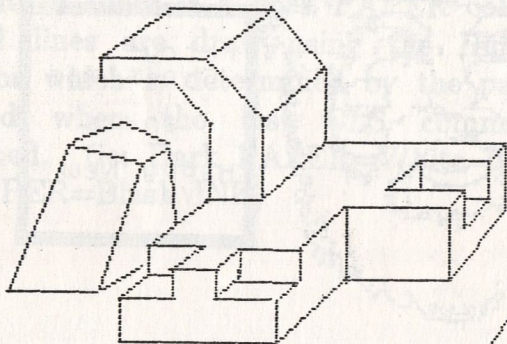
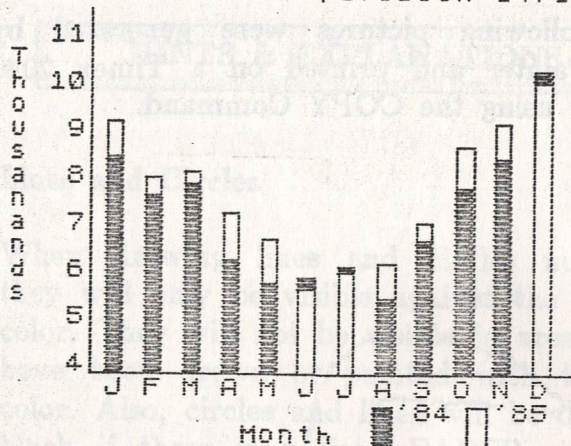
The following pictures were generated by ZebraPainter and printed on a Timex 2040 Printer using the COPY Command.



Merry
Christmas
and a
Happy New
Year!

Computer Widgits Inc.

Revenue Comparision 84/85



ZEBRAPAINTER COMMAND SUMMARY

COLOR SELECTION COMMANDS

BORDER,PAPER,INK 12

DRAWING MODE SELECTION

DRAW/ERASE Sets left button function. 13

PEN/BRUSH Selects drawing implement. 13

PRECISION DRAWING COMMANDS

LINE Draws line between 2 points. 14

CIRC Draws circle; Define center & edge. 15

DIRECTIONAL DRAWING MODES

V&H Draw any lines & curves. 16

VERT Vertical Lines Only. 17

HORZ Horizontal Lines Only. 18

KEYBOARD COMMANDS

COPY Copy Screen to Printer. 19

OLS Clear Screen. 20

WRITE Write Text on Screen. 20

LEFTY Lefthanded Button Swap. 21

SCREEN STORAGE COMMANDS

STORE Copy Active to Inactive. 22

RESTR Copy Inactive to Active. 22

EXCHG Exchange Inactive & Active 23

TAPE STORAGE COMMANDS

SAVE Save Screen to Tape. 24

LOAD Load Screen from Tape. 24

DISCLAIMER

Even though Zebra Systems, Inc. has tested the product described in this manual and reviewed it's contents, and has made every attempt to verify the accuracy of this manual and it's accompanying software, NEITHER ZEBRA SYSTEMS, INC. NOR IT'S SUPPLIERS MAKE ANY WARRANTY, EXPRESSED OR IMPLIED, WITH RESPECT TO THIS MANUAL OR TO THE SOFTWARE DESCRIBED IN THIS MANUAL, AS TO THEIR QUALITY, PERFORMANCE, MERCHANTABILITY, OR FITNESS FOR ANY PARTICULAR PURPOSE. As a result, this product and manual are sold "AS IS", and you, the purchaser, are assuming the entire risk as to their quality and performance. In no event will Zebra Systems, Inc. or it's suppliers be liable for direct, indirect, incidental or consequential damages resulting from any defect in the product or manual, even if they have been advised of the possibility of such damages. In particular, they shall have no liability for any programs developed with this product, including the costs of recovering or reproducing these programs or data. Some states do not allow the exclusion or limitation of implied warranties or liability for incidental or consequential damages, so the above limitation or exclusion may not apply to you.

Limited 90 Day Warranty

Zebra Systems, Inc. will repair or replace this Touch Tablet, Graphics Interface, or ZebraPainter cassette free of charge if it is found defective in materials or workmanship within 90 days from the date of purchase. Simply return it prepaid with a copy of your receipt to Zebra Systems, Inc. who will in its sole discretion either repair or replace the product.

The rights specified within this warranty shall be the sole and exclusive remedy of the purchaser for any claim under the warranty. IMPLIED WARRANTIES, INCLUDING THE IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS ARE LIMITED IN DURATION TO A 90-DAY PERIOD FROM THE DATE OF PURCHASE. THE PURCHASER MAY MAKE NO CLAIM FOR INCIDENTAL DAMAGES FOR ANY DEFECT.

KEYBOARD COMMAND SUMMARY

| | | |
|----|----------------------------|-------------------------------------|
| 12 | DELETE | PER LINE |
| | COLOR SELECTOR COMMANDS | |
| | DRAWING MODE SELECTION | |
| 13 | ERASE | Press left button function. |
| 14 | FREEZE | Release drawing implement. |
| | PRECISION DRAWING COMMANDS | |
| 15 | LINE | Draws line between 2 points. |
| 16 | CIRCLE | Draws circle. Define center & edge. |
| | DIRECTIONAL DRAWING MODES | |
| 17 | REL | Draws ray, lines & curves. |
| 18 | VERT | Vertical lines only. |
| 19 | HORIZ | Horizontal lines only. |
| | KEYBOARD COMMANDS | |
| 20 | COPY | Copy screen to Printer. |
| 21 | CLS | Clear screen. |
| 22 | WRITE | Write Text on screen. |
| 23 | LEFTY | Left-handed Button Group. |
| | FORNEN STORAGE COMMANDS | |
| 24 | STORE | Copy Active to Inactive. |
| 25 | RESTE | Copy Inactive to Active. |
| 26 | EXORD | Exchange Inactive & Active. |
| | TAPE STORAGE COMMANDS | |
| 27 | SAVE | Save Screen to Tape. |
| 28 | LOAD | Load Screen from Tape. |

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BORDER,PAPER,INK 12

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WRITE Write Text on Screen. 20

LEFTY Lefthanded Button Swap. 21

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RESTR Copy Inactive to Active. 22

EXOHG Exchange Inactive & Active 23

TAPE STORAGE COMMANDS

SAVE Save Screen to Tape. 24

LOAD Load Screen from Tape. 24

